CLAIMS

1 - Method of forming a plasma intended for the chemical treatment of substances, in which at least two electrodes and a layer of dielectric material located between the two electrodes are placed in a chamber in order to form plasma glow discharges, the method being characterized in that a controlled flow comprising oxygen is introduced into the chamber, the controlled flow during its introduction into the chamber containing none of the substances to be treated.

2 - Method according to Claim 1, in which the electrodes are of concentric cylindrical geometry.

3 - Method according to either of Claims 1 and 2, in which at least one of the electrodes is covered with a dielectric layer comprising alumina.

4 - Use of the plasma obtained by Claims 1 to 3 for decomposing toxic substances.

5 - Use according to the preceding claim, in which the toxic substances comprise organochlorines.

6 - Use of a plasma that can be obtained by the method according to any one of Claims 1 to 3 for decomposing toxic organochlorine substances in the liquid or solid state.

7 - Use according to the preceding claim in which the toxic substances are in the solid state.

8 - Use according to any one of Claims 4 to 7, in which the plasma includes water.

9 - Use according to any one of Claims 4 to 8, in which the CO_2 produced during decomposition of the toxic substances is measured.

10 - Device for forming a plasma, comprising at least two electrodes located in a chamber, in order to form plasma glow discharges, and means for introducing a controlled flow of oxygen-containing gas into the chamber, the device being characterized in that at least one of the electrodes is covered with a dielectric layer comprising alumina.